



Early Journal Content on JSTOR, Free to Anyone in the World

This article is one of nearly 500,000 scholarly works digitized and made freely available to everyone in the world by JSTOR.

Known as the Early Journal Content, this set of works include research articles, news, letters, and other writings published in more than 200 of the oldest leading academic journals. The works date from the mid-seventeenth to the early twentieth centuries.

We encourage people to read and share the Early Journal Content openly and to tell others that this resource exists. People may post this content online or redistribute in any way for non-commercial purposes.

Read more about Early Journal Content at <http://about.jstor.org/participate-jstor/individuals/early-journal-content>.

JSTOR is a digital library of academic journals, books, and primary source objects. JSTOR helps people discover, use, and build upon a wide range of content through a powerful research and teaching platform, and preserves this content for future generations. JSTOR is part of ITHAKA, a not-for-profit organization that also includes Ithaka S+R and Portico. For more information about JSTOR, please contact support@jstor.org.

obtained was that it was impossible for there to be a temperature as low as -100°C . at any point of the atmosphere."

Any student of the subject must also refer to theoretical researches made twenty years ago by M. de Bort, who calculated from the pressure and temperature at the earth's surface the isobars at a height of 4,000 metres (about $2\frac{1}{2}$ miles). He showed that most of the areas of high and low pressure observed near the ground become quite effaced at higher levels, where there is a much less complex pressure distribution.*

* See *Annales du Bureau Central Météorologique*, 1887 and 1888.

September 1909.

Note.—Since the above paper was passed for press, there has been published a valuable report, communicated to the British Association (Winnipeg, 1909) by Messrs. E. Gold and W. A. Harwood, on "The Present State of our Knowledge of the Upper Atmosphere as obtained by the use of Kites, Balloons, and Pilot Balloons." The title of Advective Region is suggested for the so-called "Isothermal Layer," and M. de Bort has suggested Stratosphere as a suitable title. In contradistinction, that portion of the atmosphere below the "Isothermal Layer" would be known as the Convective Region, or Troposphere.

There will be presently published by the Meteorological Office a report on "The Free Atmosphere in the Region of the British Isles," in which Mr. Dines gives a full account of his instruments and methods, and Dr. Shaw discusses "The Perturbations of the Stratosphere."

November 1909.

THE HIGHEST BALLOON ASCENSION IN AMERICA

Dr. A. Lawrence Rotch has a short account in *Science* (No. 766) of the results of balloon experiments in our eastern states in 1908. His statement follows:

"Although a large number of *ballons-sondes* were despatched from St. Louis in 1904-7 under the direction of the writer, none had been employed in the eastern states until 1908. In May and July, that year, four *ballons-sondes* were launched from Pittsfield, Mass., with special precautions to limit the time they remained in the air and to prevent them from drifting out to sea with the upper westerly wind. Three of the registering instruments have been returned to the Blue Hill Observatory with good records. The first instrument sent up on May 7 was not found for ten months and the record,

forming the subject of the present article, is very interesting because it gives complete temperature data from the ground up to 17,700 meters, or 11 miles. This is 650 meters higher than the highest ascension from St. Louis, which, by a coincidence, was also the first one to be made there. On May 7 a general storm prevailed, so that the balloon, travelling from the east, was soon lost in the cloud and its subsequent drift could not be followed, but the resultant course was 59 miles from the southwest, as determined by the place where the instrument fell two hours later.

"At the ground the temperature was $4^{\circ}.5$ C., and this decreased as the balloon rose to the base of the cloud, which itself was considerably warmer than the underlying air.

"Above the cloud the temperature continued to fall with increasing rapidity up to a height of 12,500 meters (nearly eight miles) where the minimum of $-54^{\circ}.5$ C. was registered. Here the great warm stratum was entered and penetrated farther than ever before in this country, namely, to the height of 17,700 meters, where the temperature was $-45^{\circ}.6$ C. An increase of 10° occurred, however, in the first 3,000 meters, for above 15,500 meters nearly isothermal conditions prevailed, confirming the belief of Teisserenc de Bort that what he calls the "stratosphere" is composed of a lower inverting layer with isothermal conditions above extending to an unknown height. In an ascension last November in Belgium the relatively warm stratum was found to extend from 12,900 meters to the enormous height of 29,000 meters, or 18 miles, where there was still no indication of its diminution."

GEOGRAPHICAL RECORD

THE AMERICAN GEOGRAPHICAL SOCIETY

MEETINGS OF THE SOCIETY. A special meeting of the Society was held on Monday evening, Dec. 6, 1909, at the Engineering Societies Building, when Commander Robert E. Peary, U. S. N., delivered an address on "The Discovery of the North Pole." The Hall was crowded and many were unable to gain admittance. President Huntington, in introducing the explorer, said:

"It is my great privilege this evening to introduce to you, not alone the man whose unwearied efforts have so wonderfully broadened our knowledge of the world, but the man who by his own choice and the sacrifice of the best he had to give—the years of his life—becomes for us a type and expression of our own aspirations. The endeavor of Commander Peary is a demonstration in an individual of the idealism of our race; that eager willingness to face all chances that the sign manual of humanity may be placed on the outermost edge of the